

What is claimed is:

10069067 000500

1. An isolated CCR3 regulatory site comprising base pairs in an untranslated exon 1 of a human CCR3 gene or mRNA capable of binding to regulatory elements.

10063067 000000

2. The regulatory site of claim 1 comprising SEQ ID NO:16.
3. The regulatory site of claim 1 wherein the regulatory elements are binding sites for antisense oligonucleotides.
4. The regulatory site of claim 1 wherein the regulatory elements are binding sites for transcription factors.
5. The regulatory site of claim 4 wherein the transcription factors are at least one of GATA-1, GATA-2, GATA-3, AML-1a, and combinations thereof.
6. The regulatory site of claim 4 wherein said sites are at least one of SEQ ID NO:17, SEQ ID NO:18, and SEQ ID NO:19.
7. The regulatory site of claim 1 comprising SEQ ID NO:21.
8. The regulatory site of claim 3 wherein said sites are at least one of SEQ ID NO:22, SEQ ID NO:23, and SEQ ID NO:24.

9. A method for cell selective gene expression in a human comprising providing to said human a pharmaceutically acceptable formulation of at least one regulatory element for binding to an untranslated exon in a human cell containing a CCR3 gene or mRNA.

10069067 020509  
2005020

10. The method of claim 9 wherein said element regulates transcription of at least one of exon 1, exon 2, and exon 3.

11. The method of claim 9 wherein said element regulates binding of a transcription factor.

12. The method of claim 9 wherein said element is selected from the group consisting of a transcription factor inhibitor, an antisense oligonucleotide, and combinations thereof.

13. The method of claim 12 wherein said element is an inhibitor for a GATA transcription factor.

14. The method of claim 12 wherein the cell is selected from the group consisting of a leukocyte, an epithelial cell, an endothelial cell, and combinations thereof.

15. A method of regulating expression of CCR3 comprising providing an inhibitor for a CCR3 exon 1 transcription factor to a human cell containing a CCR3 receptor.

10059067 020909

16. The method of claim 15 wherein the inhibitor binds to CCR3 exon 1 at a GATA binding site.

17. The method of claim 16 wherein the binding site comprises SEQ ID NO:16.

18. The method of claim 16 wherein the binding site is at least one of SEQ ID NO:17, SEQ ID NO:18, and SEQ ID NO:19.

10069067 020700

19. An isolated CCR3 regulatory site comprising base pairs in untranslated exon 2 of a human CCR3 gene or mRNA capable of binding to regulatory elements.

10063967 020900  
003020 13053001



20. The regulatory site of claim 19 wherein the regulatory elements are selected from the group consisting of binding sites for antisense oligonucleotides, binding sites for transcription factors, and combinations thereof.

21. A method of regulating expression of CCR3 comprising providing at least one element to regulate untranslated exon 2 in a CCR3 gene or mRNA.

479997 1 300000000

22. The method of claim 21 wherein said element regulates transcription of untranslated exon 2.

23. The method of claim 21 wherein said element regulates binding of a transcription factor.

24. The method of claim 21 wherein said element is selected from the group consisting of a transcription factor inhibitor, an antisense oligonucleotide, and combinations thereof.

10949067 020500  
2005020 13053001

25. An isolated CCR3 regulatory site comprising base pairs in untranslated exon 3 of a CCR3 gene or mRNA capable of binding to regulatory elements.

20050201 19055001

26. The regulatory site of claim 25 wherein the regulatory elements are selected from the group consisting of binding sites for antisense oligonucleotides, binding sites for transcription factors, and combinations thereof.

10065007 030600  
20065007 030600

27. A method of regulating expression of CCR3 comprising providing at least one element to regulate untranslated exon 3 in a CCR3 gene or mRNA.

28. The method of claim 27 wherein said element regulates transcription of untranslated exon 3.
29. The method of claim 27 wherein said element regulates binding of a transcription factor.
30. The method of claim 27 wherein said element is selected from the group consisting of a transcription factor inhibitor, an antisense oligonucleotide, and combinations thereof.

31. An isolated CCR3 regulatory site comprising base pairs in a promoter of a human CCR3 gene or mRNA capable of binding to regulatory elements.



32. The regulatory site of claim 31 comprising SEQ ID NO:20.
33. The regulatory site of claim 31 wherein the regulatory elements are selected from the group consisting of binding sites for antisense oligonucleotides, binding sites for transcription factors, and combinations thereof.
34. The regulatory site of claim 33 wherein the transcription factors are selected from the group consisting of GATA-1, GATA-2, GATA-3, AML-1, C/EBP, and combinations thereof.

- [illegible]

36. The method of claim 35 wherein said element regulates transcription of at least one of exon 1, exon 2, exon 3, and exon 4.

37. The method of claim 35 wherein said element regulates binding of a transcription factor.

38. The method of claim 35 wherein said element is selected from the group consisting of a transcription factor inhibitor, an antisense oligonucleotide, and combinations thereof.

39. The method of claim 38 wherein said element is an inhibitor for a transcription factor selected from the group consisting of a GATA transcription factor, a C/EBP transcription factor, an AML-1 transcription factor, and combinations thereof.

40. An isolated complex of CCR3 exon 2 and an antisense oligonucleotide bound to at least one base pair in exon 2, said complex blocking mRNA accumulation.

- [illegible]

42. An isolated nucleic acid regulatory site for human CCR3 expression comprising SEQ ID NO: 16.

[illegible]

43. The regulatory site of claim 42 selected from the group consisting of SEQ ID NO: 17, SEQ ID NO:18, SEQ ID NO:19, and combinations thereof.

4706977 0000

44. An isolated nucleic acid regulatory site for human CCR3 expression comprising SEQ ID NO:21.

10063067 030500



45. The regulatory site of claim 44 selected from the group consisting of SEQ ID NO: 22, SEQ ID NO:23, SEQ ID NO:24, and combinations thereof.

20250220 10:55:00

- 5

[illegible]